

FE14  
DIA  
6/4/02

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Nicholas C. Nicolaides, et al.

Serial No.: 09/760,285

Group Art Unit: 1632

Filing Date: January 15, 2001

Examiner: D. T. Nguyen

For: CHEMICAL INHIBITORS OF MISMATCH REPAIR

RECEIVED

JUN 04 2002

TECH CENTER 1600/2900

DATE OF DEPOSIT: May 28, 2002  
EXPRESS MAIL NO: EV 058073179 USAssistant Commissioner for Patents  
Washington DC 20231

Dear Sir:

## RESPONSE TO REQUIREMENT FOR RESTRICTION UNDER

## 37 C.F.R. § 1.143

This is in response to the Office Action dated February 27, 2002.

The Examiner has set forth eighteen Groups of claims and has required the election of one Group for examination. Applicants respectively traverse in part. However, in order to be fully responsive to the Office Action, Applicants hereby elect Group VI (Claims 23, 24, 27-29, 68 and 70). Furthermore, the Examiner has requested an election of species if Group I was elected. As Applicants are requesting the Examiner to join Groups I with the elected Group VI, Applicants hereby elect the following species: 1,2-dimethyl anthracene, wherein  $R_1$  and  $R_2$  are methyl groups and each of  $R_3$ - $R_{10}$  is hydrogen, should the Examiner agree to join Groups I and VI.

Group I claims are drawn to a method of making a hypermutable cell wherein anthracene and derivatives thereof are employed as the inhibitor of mismatch repair. Group VI is drawn to methods of generating a mutation in a gene of interest by exposing a cell containing the gene of interest to a chemical inhibitor of mismatch repair. These claims form the core of the invention, which is to make cells hypermutable so that genes of interest are

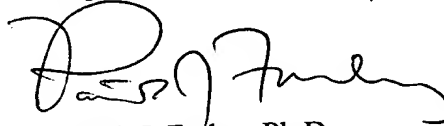
mutated, and these genes of interest can be screened for changes at the nucleic acid level, the amino acid level, or at the phenotypic level. The goals of the claims in Groups I and VI are the same and the steps are substantially the same. Therefore, the groups are highly related, and it is appropriate that they be examined together. Applicants respectfully submit that Groups I and VI should be joined as one Group, which would be elected for prosecution if joined.

Applicants, acknowledge, with appreciation, the Examiner's indication that Groups VII-XI would be rejoined with Group VI, upon the allowance of the linking claim. However, Applicants respectfully note that the claims in Groups VI-XI are not directed to different goals, as the goal is generally to promote mutation in genes of interest by rendering cells hypermutable upon the introduction of a chemical inhibitor of mismatch repair. Subsequent steps in some claims are all directed to analysis to determine whether mutations have been introduced into genes of interest. These analyses may involve an examination of nucleic acid, proteins or phenotype. These claims are all highly related as evidenced by the fact that many of these claims are searched in the same class and subclasses (see, for example, claims in Groups IX, X and XI, which are drawn to different methods of analyses in subsequent steps from exposure to the chemical inhibitor, and yet which are searchable in Class 514, subclass 44). Therefore, it would not be an undue burden on the Examiner to search these claims together. It appears that the Requirement for Restriction is based upon the Examiner's inclusion of *in vitro*, *in vivo*, or *in situ* into the claims. Notably, the Examiner is reading limitations into the claims that are not recited. As it is inappropriate to read limitations into the claims, these groups should be rejoined as a single group. Applicants respectfully request reconsideration of the requirement for restriction on this basis and rejoinder of Groups VI-XI. Applicants would elect Groups I, and VI-XI, if joined.

In summary, the Applicants respectfully request that the Examiner join Groups I, and VI-XI, which would be elected for prosecution in this Application. If the Examiner does not agree to join Groups I and VI-XI, Applicants urge the Examiner to join groups VI-XI, which would be elected for prosecution. In order to be fully responsive to the Office Action, Applicants designate Group VI for prosecution should no group be joined. Furthermore, should Group I be joined, Applicants hereby elect 1,2-dimethyl anthracene, wherein  $R_1$  and  $R_2$  are methyl groups and each of  $R_3$ - $R_{10}$  is hydrogen, as the species for examination.

Applicants invite the Examiner to call the undersigned if the Examiner has any questions regarding this response.

Respectfully submitted,



Patrick J. Farley, Ph.D.  
Reg. No. 42,524

Woodcock Washburn LLP  
One Liberty Place, 46<sup>th</sup> Floor  
Philadelphia, PA 19103  
Tel. (215) 568-3100  
Fax (215) 568-3439